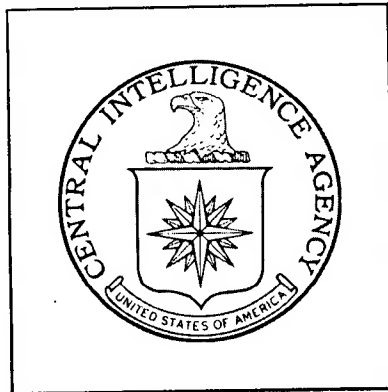


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**DIRECTORATE OF
INTELLIGENCE**

**Industrial Facilities
(Non-Military)**

Basic Imagery Interpretation Report

Na-chi Chemical Fertilizer Plant Lu-chou

Na-chi, China



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DATE MAY 1972
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Directorate of Intelligence
Imagery Analysis Service

RCS 13/0058/72

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INSTALLATION OR ACTIVITY NAME		COUNTRY
Na-chi Chemical Fertilizer Plant Lu-chou		CH
UTM COORDINATES	GEOGRAPHIC COORDINATES	
48RWG365843	28-46-35N 105-22-35E	
MAP REFERENCE		
15th RTS. USATC, Series 200, Sheet M0495-23HL, 2nd ed, May 65, Scale 1:200,000 (SECRET)		
LATEST IMAGERY USED		NEGATION DATE (If required)
		NA

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ABSTRACT

The primary function of Na-chi Chemical Fertilizer Plant Lu-chou is the production of ammonia and prilled urea fertilizer. It is the first nitrogenous fertilizer plant observed in China which uses natural gas as the feed material.

Initial construction activity for the plant was observed in March 1963. By January 1966 the plant was complete. The plant was first observed in operation in February 1967. It could not be determined if the plant was operating in May, August, and December 1968. It was not operating in July 1971.

This report includes a photograph, a process flow chart, a line drawing of the plant, and a chronological summary of construction and operational status.

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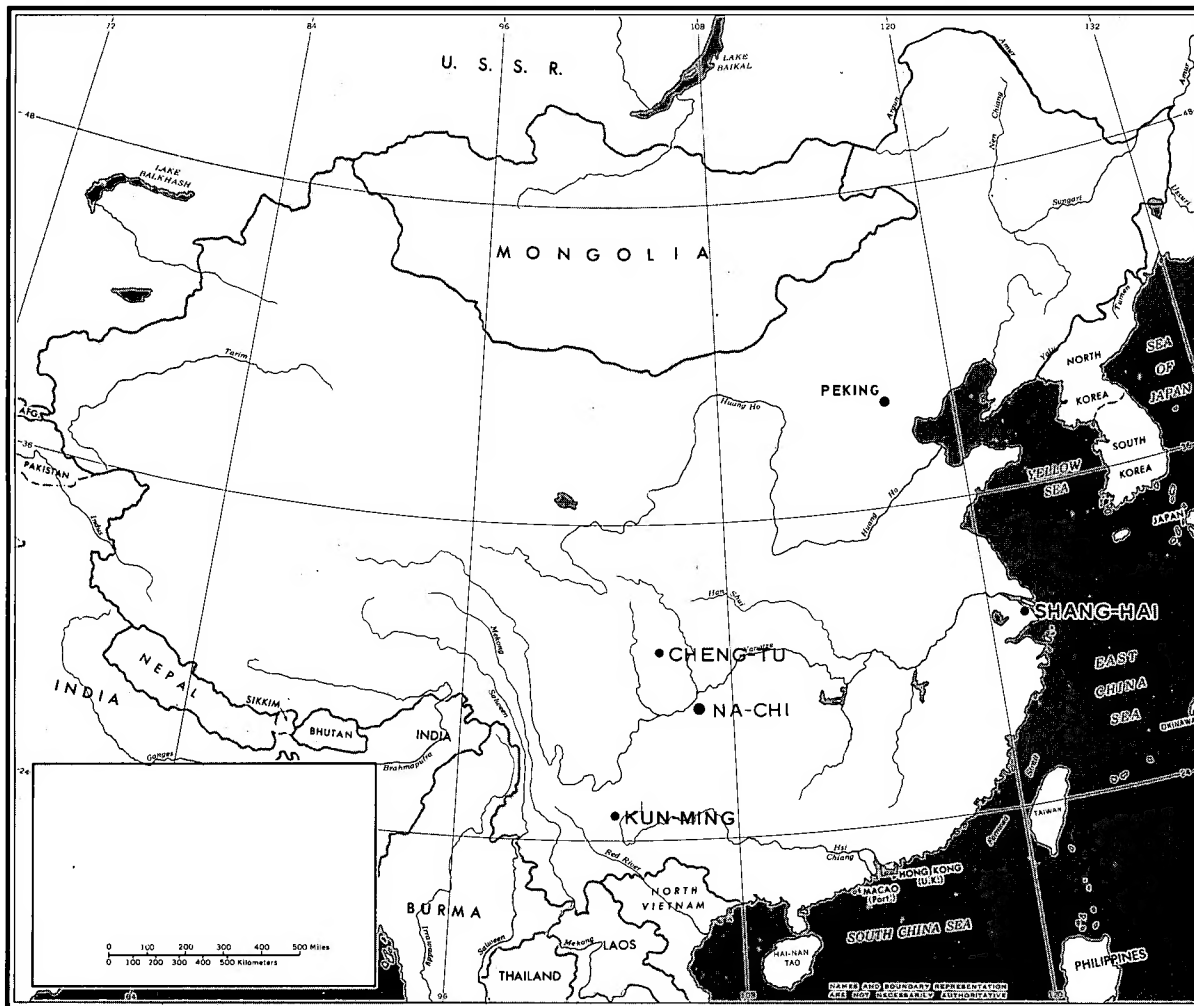
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INTRODUCTION

Na-chi Chemical Fertilizer Plant Lu-chou is located 8 nautical miles south of the center of Lu-hsien (Lu-chou) near the village of Na-chi, Szechwan Province (see Figure 1). Two heat and thermal power plants are collocated with the plant and supply electric power and steam.

**FIGURE 1. LOCATION MAP.****TOP SECRET RUFF**

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TOP SECRET RUFF**BASIC DESCRIPTION**

The plant occupies about 50 acres in an area measuring approximately 1,300 by 1,700 feet overall (see Figures 2 and 3). It is partially secured, with only segments of wall in place. It is served by a good road network and by shipping facilities on the Chang Chiang (Yangtze River). A conveyor connects the urea warehouse at the plant with the shipping facilities. No rail spur is present.

Operational Functions

The primary function of the plant is the production of ammonia and prilled urea. The plant is designed to use natural gas as the source of hydrogen for the synthesis of ammonia and as a source of carbon dioxide for the production of urea. Nitrogen for the ammonia production is probably derived by burning air in a secondary reformer. The process flow for the products is shown in Figure 4.

This is the first nitrogenous fertilizer plant observed in China which utilizes natural gas as feed material. Natural gas is found in the Szechwan Basin and is composed primarily of methane. This use of natural gas probably represents another effort to conserve coal, which normally provides the feed material at a nitrogen fertilizer plant.

A small chemical processing area is adjacent to the urea production area. The only identifiable features in this area are a gasholder and an ammonia synthesis building with a converter tower. The purpose of these facilities cannot be determined at this time, but production in this area is probably small in relation to the other plant components.

Construction and Operational Status

The plant was first observed under construction on photography of March 1963. At that time the northernmost chemical processing area was in a midstage of construction and nine storage buildings and the small thermal power plant were complete. By August 1965 the large heat and thermal power plant, four large workshops in the support area, the ammonia synthesis building and converter tower in the southern ammonia production area, the urea synthesis building, and a warehouse/shipping building were complete. Between August 1965 and January 1966 the gas purification and reform equipment in the southern ammonia production area, the water treatment area, the prilling tower, the urea warehouse, the northernmost chemical processing area and the conveyor system were completed. Since that time, the large heat and thermal power plant has been expanded and several support buildings have been added.

The plant was first observed in operation in February 1967. This was indicated by vapor emissions from the large power plant, the gas purification equipment, and the prilling tower. It could not be determined if the plant was operating in May, August, and December 1968 due to the small scale of the photography. The plant was not in operation in July 1971, the date of the latest photography.

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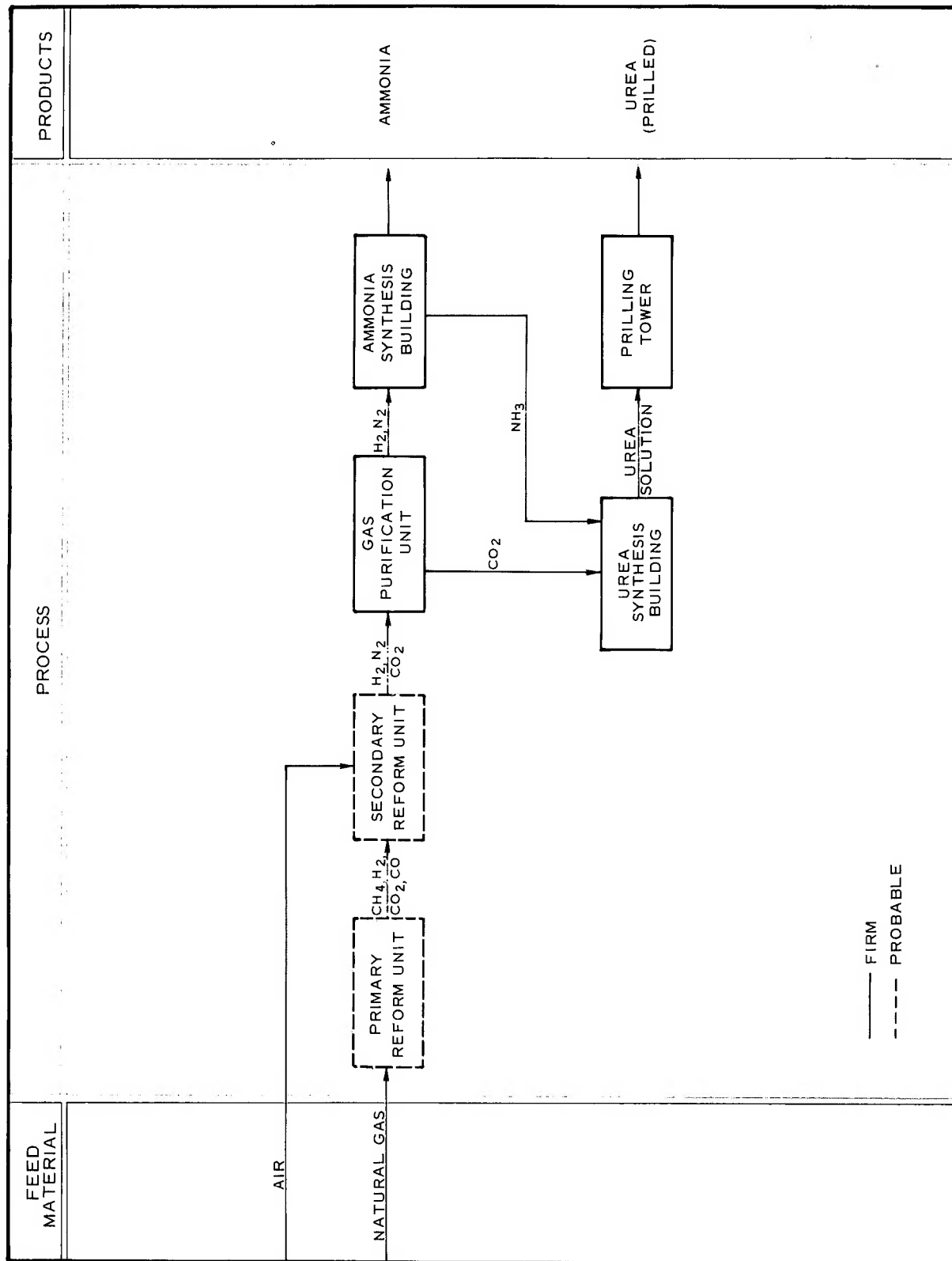


FIGURE 4. PROCESS FLOW AT NA-CHI CHEMICAL FERTILIZER PLANT LU-CHOU.

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REFERENCES

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Map

15th RTS. US Air Target Chart, Series 200, Sheet M0495-23HL, 2nd
edition, May 1965, Scale 1:200,000 (SECRET, [REDACTED])

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Requirement

COMIREX N07

Support Number 428908

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